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PAR 212

30 Nov 64

SUBJECT: Color Acquisition System Review Study

TASK/PROBLEM

1. Investigate color photography as a possible anticipated intelligence medium. Investigation should cover the capability of present and possible future acquisition systems in an attempt to predict future requirements to support exploitation and data reduction of the collected color photographic intelligence material.

DISCUSSION

2. During this quarter studies of materials for acquisition systems were limited primarily to the evaluation of Kodak Special Color Film (Estar Thin Base) Type SO-121. Successful high altitude acquisitions (approximately 68,000 feet) were obtained on both 70mm and 9.5-inch widths. The 70mm material was flown in conjunction with a black-and-white material, Kodak High Definition Aerial Film (Estar Thin Base) Type 4404. The 9.5-inch material was flown in a camera system with an 18-inch by 18-inch format.

3. Ground resolution on the 70mm was estimated to be about [REDACTED] at sea level; in areas above sea level such as high mountains region, resolutions as low as [REDACTED] were observed. In the 9.5 inch material ground resolution was estimated to be on an average of [REDACTED]. In both cases, high-contrast targets such as white painted line dividers on black top roads and parking areas were readily observed.

4. The data included in the open-end chart, "Usability Data for Acquisition Materials," was verified by means of the two acquisitions mentioned.

25X1

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Declass Review by NGA.

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5. Seven briefing aid designs were prepared for consideration by the customer.

6. Customer representatives visited the contractor facility on 6 October and 17 November to review PAR progress. On both occasions, the extent of current progress was demonstrated with photographic materials generated by the recent high-altitude acquisition on Type SO-121 color and Type 4404 black-and-white films. These materials included originals, duplicates, stereo pairs and enlargements.

a. On 6 October the review covered:

- (1) Current progress
- (2) Demonstration materials (above).
- (3) Material usability data

b. The 17 November review covered:

- (1) Background efforts. This was to provide some perspective for a new representative.
- (2) Current progress
- (3) Demonstration materials (above)
- (4) Briefing aids. These were discussed at some length, and it was indicated that a modified approach would be required to present the color acquisition story. More specific customer guidance will be given after he has received rough drafts of proposed briefing aid designs.

(5) Interest in low altitude materials. The customer pointed out that page 14, paragraph 10 of the 8 September 1964 quarterly is in error. He does have interest below 5,000 feet as well as above 50,000 feet. Materials for intermediate acquisition levels are of low interest.

PLANNED ACTIVITIES

7. In accordance with the customer's request, prepare and submit for approval rough drafts of all anticipated briefing aids.

8. Progress on this PAR has reached the point where an interim report may soon be initiated.

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